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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,776	11/26/2003	Daniel J. VanEpps JR.	9314-59	9674

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EXAMINER	
HANNON, CHRISTIAN A	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/723,776	VANEPPS ET AL.	
	Examiner	Art Unit	
	Christian A. Hannon	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-21 and 23-38* is/are rejected.

7)☒ Claim(s) *6 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/21/05, 9/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 7, 8, 10-12, 14, 15, 17, 18, 23-26, 30-33, 37 & 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Corkum (US 6,134,455).

Regarding claim 1, Corkum teaches a method of operating an electronic device comprising receiving a noise signal, generating a sound metric for the noise signal, and generating an alert signal based on the sound metric (Column 2, Lines 52-62; Corkum). Corkum teaches that a noise signal, or ambient noise is received at speaker 48 of figure 2, a sound metric is generated for the noise signal in determiner 58 of figure 2, and a alert signal based on the determination at 58, or sound metric, is generated.

With regard to claim 2, Corkum teaches the method of claim 1, wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the sound metric (Column 2, Lines 59-62; Corkum).

In regards to claim 7, Corkum teaches the method of claim 1, wherein the sound metric comprises a loudness profile and/or a sharpness profile (Column 4, Lines 57-65; Corkum). Corkum teaches that the ambient sound metrics delivered to the determiner unit 58 in figure 2, are determined to be loud or quiet, or sharp or dull.

With respect to claim 8, Corkum teaches the method of claim 1, further comprising receiving an incoming communication and/or scheduled event at the electronic device and wherein receiving the noise signal comprises receiving the noise signal responsive to receiving the incoming communication (Column 4, Lines 48-54; Corkum).

Regarding claim 10, Corkum teaches the method of claim 1, wherein the electronic device is a mobile terminal (Figure 2; Corkum).

With regard to claim 11, Corkum teaches a method of operating an electronic device, comprising providing a plurality of alert profiles – selection or deselection of the automatic ringer volume function , receiving a user selection of one of the plurality of alert profiles – through the input actuator 84 in figure 2, and generating an alert signal that is based on the selected one of the plurality of alert profiles (Column 6, Lines 48-55; Corkum).

In regards to claim 12, Corkum teaches the method of claim 11, wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the selected one of the plurality of alert profiles (Column 6, Lines 55-60; Corkum).

With respect to claim 14, Corkum teaches a method of operating an electronic device comprising providing a plurality of alert profiles, herein being interpreted by the examiner to be various levels of alert loudness, receiving a noise signal, selecting one of the plurality of alert profiles responsive to receiving the noise signal and generating

an alert signal that is based on the selected one of the plurality of alert profiles (Column 4, Lines 57-60; Column 2, Lines 57-67; Corkum).

In regards to claim 15, Corkum teaches the method of claim 14, wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the selected one of the plurality of alert profiles (Column 4, Lines 57-60; Column 2, Lines 57-67; Corkum).

With respect to claim 17, Corkum teaches an electronic device comprising a receiver that is configured to receive a noise signal (Figure 2, Item 48; Corkum), a sound metric processor that is configured to generate a sound metric for the noise signal (Figure 2, Item 58; Corkum) and an alert generator (Figure 2, Item 66; Corkum) that is configured to generate an alert signal that is based on the sound metric (Column 2, Lines 52-62; Corkum).

Regarding claim 18, Corkum teaches the electronic device of claim 17, where the alert generator is further configured to generate an alert signal having a spectral composition that is based on the sound metric (Column 2, Lines 59-62; Corkum).

With regard to claim 23, Corkum teaches the electronic device of claim 17, wherein the sound metric comprises a loudness profile and a sharpness profile (Column 4, Lines 57-65; Corkum). Corkum teaches that the ambient sound metrics delivered to the determiner unit 58 in figure 2, are determined to be loud or quiet, or sharp or dull.

In regards to claim 24, Corkum teaches the electronic device of claim 17, wherein the electronic device is a mobile terminal (Figure 2; Corkum).

With respect to claims 25 & 32, Corkum teaches an electronic device comprising a means for receiving a noise signal (Figure 2, Item 48; Corkum) means for generating a sound metric for the noise signal (Figure 2, Item 58; Corkum) and means for generating an alert signal (Figure 2, Item 66; Corkum) based on the sound metric (Column 2, Lines 52-62; Corkum). It is further noted that a computer readable storage medium with computer readable program code is inherent in Corkum.

Regarding claims 26 & 33, Corkum teaches the electronic device of claim 25 and the computer program product of claim 32, respectively, wherein the means for generating the alert signal comprises a means for generating the alert signal having a spectral composition that is based on the sound metric (Column 2, Lines 59-62; Corkum). It is further noted that a computer readable storage medium with computer readable program code is inherent in Corkum.

With regard to claims 30 & 37, Corkum teaches an electronic device comprising a means for providing a plurality of alert profiles (Figure 2, Item 84; Corkum), means for receiving a user selection of one of the plurality of alert profiles (Figure 2, Item 54; Corkum) and means for generating an alert signal that is based on the selected one of the plurality of alert profiles (Figure 2, Item 66; Corkum). It is further noted that a computer readable storage medium with computer readable program code is inherent in Corkum.

In regard to claims 31 & 38, Corkum teaches an electronic device comprising a means for providing a plurality of alert profiles (Figure 2, Item 54; Corkum), means for receiving a noise signal (Figure 2, Item 48; Corkum), means for selecting one of the

plurality of alert profiles responsive to receiving the noise signal (Figure 2, Item 84; Corkum) and a means for generating an alert signal that is based on the selected one of the plurality of alert profiles (Figure 2, Item 66; Corkum. It is further noted that a computer readable storage medium with computer readable program code is inherent in Corkum.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-5, 13, 16, 19-21, 27-29 & 34-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Corkum in view of Boillot et al (US 2005/0278165), herein Boillot.

Regarding claims 3, 19, 27 & 34, Corkum teaches the method of claim 2 and the electronic device of claims 18 & 26, and the computer program product of claim 33 respectively, wherein the sound metric is a loudness profile (Column 4, Lines 57-65). Corkum fails to teach that generating the sound metric comprises performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal. Boillot teaches that generating the sound metric comprises performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal (Figure 18, Step 1800; Page 8, [0091]; Boillot). It is noted that obvious to one of

ordinary skill in the art a FFT is used to convert from the time domain into the frequency domain. It would have been obvious to combine the teachings of Corkum to include the Fourier transform, such as that taught by Boillot, as a means to analyze the frequency spectrum of the sampled ambient noise. It is further noted that a computer readable storage medium with computer readable program code is obvious in Corkum & Boillot.

With regard to claims 4, 20, 28 & 35, Corkum and Boillot teach the method of claim 3, and the electronic device of claims 19 & 27, and the computer program product of claim 34, respectively. Boillot further teaches that generating the sound metric further comprises calculating a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method (Page 4, [0050]; Figure 4; Boillot), determining an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band (Page 3, [0038],[0039]; Figure 18; Boillot). It is further noted that a computer readable storage medium with computer readable program code is obvious in Corkum & Boillot.

In regard to claims 5, 21, 29 & 36, Corkum and Boillot teach the method of claim 4, and the electronic device of claims 20 and 28, and the computer program product of claim 35, respectively. Boillot further teaches wherein generating the alert signal comprises determining a power value for the alert signal based on the loudness profile for the noise signal (Page 8, [0096]; Boillot), determining a transfer function for an alert signal transmit filter based on the loudness profile for the noise signal and transmitting

the alert signal at the power value using the alert signal transmit filter (Page 6, [0073]; Boillot). It is further noted that a computer readable storage medium with computer readable program code is obvious in Corkum & Boillot

With respect to claims 13 & 16, Corkum teaches the method of Claim 11 & 14, wherein generating the alert signal comprises determining a power value for the alert signal based on the selected on of the plurality of alert profiles for the noise signal (Column 4, Lines 57-60; Corkum), however Corkum fails to teach in addition that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal. Boillot teaches that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal (Page 6, [0073]; Boillot). It would have been obvious to one of ordinary skill in the art to combine the teachings of Corkum to include that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal, such as that taught by Boillot, in order to maximize power consumed in outputting the alert tone.

Allowable Subject Matter

5. Claims 6 & 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6 & 22, Corkum and Boillot teach the method of claim 5, and the electronic device of claim 21, however they both fail to teach wherein determining the transfer function for the alert signal transmit filter comprises selecting coefficients for the alert signal transmit filter.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ritter (US 6,363,265) discloses a volume control for an alert generator.

Kanai (US 6,233,462) discloses a portable terminal device for automatically controlling transmitting voice level and calling sound level.

Rader et al (US 2003/0064746) disclose a sound enhancement for mobile phones and other products producing personalized audio for users.

Himberg et al (US 6,912,386) disclose a method for controlling operation of a mobile device by detecting usage situations.

Nielsen (US 2004/0204147) discloses a microphone aided vibrator tuning.

Gupta et al (US 6,766,176) disclose a method and apparatus for automatically adjusting speaker and microphone gains within a mobile telephone.

Cuddy (US 6,246,761) discloses an automatic volume control for a telephone ringer.

Martinez et al (US 6,993,349) disclose a smart ringer.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian A. Hannon
March 1, 2006

3/3/06

QUOCHIEN B. VUONG
PRIMARY EXAMINER